

## SEQUENCE LISTING

RECEIVED

JAN 31 2001

TECH CENTER 1600/2800

Q1  
<110> DING, Jeak Ling  
TAN, Nguan Soon  
HO, Bow  
LAM, Toong Jin

<120> ISOLATED NUCLEIC ACIDS ENCODING A SECRETORY SIGNAL FOR EXPRESSION AND  
SECRETION OF HETEROLOGOUS RECOMBINANT PROTEINS

<130> 1781-0178P

<140> US 09/426,776

<141> 1999-10-23

Sub B2  
<160> 22

<170> PatentIn version 3.0

<210> 1

<211> 29

<212> DNA

<213> Artificial

<220>

<223> Chloramphenicol acetyltransferase (CAT) gene forward primer derived  
from bacteria

<400> 1

gaagatctgc tggagaaaaa aatcactgg

29

<210> 2

<211> 29

<212> DNA

<213> Artificial

<220>

<223> Chloramphenicol acetyltransferase (CAT) gene forward primer derived  
from bacteria

<400> 2

gcacggccg tgccttaaaa aaattacgc

29

<210> 3

<211> 21

<212> DNA

<213> Artificial

<220>

<223> OaVtgExon2 reverse primer derived from Oreochromis aureus vitellogenin  
gene exon 2

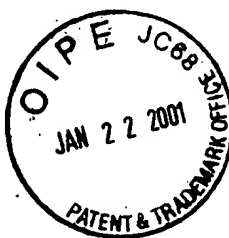
<400> 3

ccaagttgga ctggtccccc a

21

<210> 4

<211> 19



<212> DNA  
<213> Artificial  
<220>  
<223> EGFP reverse primer derived from Aequoria victoria green fluorescent protein

<400> 4  
ccotcgccgg acacgctga 19

<210> 5  
<211> 29  
<212> DNA  
<213> Artificial

<220>  
<223> B-lactamase forward primer derived from bacteria

<400> 5  
cgggatcca gaaacgctgg tgaaagtaa 29

<210> 6  
<211> 29  
<212> DNA  
<213> Artificial

<220>  
<223> B-lactamase reverse primer derived from bacteria

<400> 6  
gcggccgtta ccaatgctta atcagtgag 29

<210> 7  
<211> 29  
<212> DNA  
<213> Artificial

<220>  
<223> Forward primer from BspSS

<400> 7  
gggtcatgag ggtgcttgta ctagctctt 29

<210> 8  
<211> 30  
<212> DNA  
<213> Artificial

<220>  
<223> BamGal forward primer with BamHI restriction site and some beta-galactosidase sequence derived from bacteria

<400> 8  
ccatggatcc cgtgatttcg ttgccggtct 30

<210> 9  
<211> 26  
<212> DNA  
<213> Artificial

<220>  
<223> EagGal reverse primer with EagI restriction site

<400> 9  
ggcagcgccg ggcagacatg gcctgc

26

<210> 10  
<211> 21  
<212> PRT  
<213> Oreochromis aureus

<400> 10

Met Arg Val Leu Val Leu Ala Leu Ala Val Ala Leu Ala Val Gly Asp  
1 5 10 15

Gly Ser Asn Leu Gly  
20

<210> 11  
<211> 80  
<212> DNA  
<213> Oreochromis aureus

<400> 11  
attcacatcc accagccatg aggggtgcttg tactagctct tgctgtggct ctcgcagtgg 60  
gggaccagtc caacttggggg 80

<210> 12  
<211> 204  
<212> DNA  
<213> Artificial

<220>  
<223> Junction of Vtgss (derived from Oreochromis aureus) and CrFCES  
(Carcinoscorpius rotundicauda ES - EcoRI-SalI flanking fragment of  
Factor C) determined by sequencing using the Ac5 forward primer and  
pcDNA3.1/BGH reverse primer

<400> 12  
gtggaattct gcagatgcta ccggactcag atcaattcac atccaccagc catgagggtg 60  
cttgtagtag ctcttgctgt ggctctcgca gtgggggacc agtccaactt gggggatcta 120  
ggcttggtgtg atgaaacgag gttcgagtgt aagtgtggcg atccaggcta tgtgttcaac 180  
attccagtga aacaatgtac atac 204

<210> 13  
<211> 51  
<212> PRT

<213> Artificial

<220>

<223> VtgCrFCES protein - Vtg derived from Oreochromis aureus and CrFCES derived from Carcinoscopus rotundicauda ES - EcoRI-SalI flanking fragment of Factor C

<400> 13

Met Arg Val Leu Val Leu Ala Leu Ala Val Ala Leu Ala Val Gly Asp  
1 5 10 15

Gln Ser Asn Leu Gly Asp Leu Gly Leu Cys Asp Glu Thr Arg Phe Glu  
20 25 30

Cys Lys Cys Gly Asp Pro Gly Tyr Val Phe Asn Ile Pro Val Lys Gln  
35 40 45

Cys Tyr Phe  
50

<210> 14

<211> 152

<212> DNA

<213> Artificial

<220>

<223> Part of the Vtgss-CAT (Vtgss from Oreochromis aureus - CAT of bacterial origin) fusion in the pBSVtgCAT vector

<400> 14

atcgataagc ttgatgctac cggactcaga tcaattcaca tccaccagcc atgagggtgc 60

ttgtactagc tcttgctgtg gctctgcag tgggggacca gtccaacttg ggggatctgc 120

tggagaaaaa aatcactgga tataccaccg tt 152

<210> 15

<211> 59

<212> DNA

<213> Artificial

<220>

<223> Part of the Vtgss-CAT (Vtgss from Oreochromis aureus - CAT of bacterial origin) fusion in the pBSVtgCAT vector

<400> 15

ggcggggcgt aattttttta aggcacggcc gatgcgacgg tatcgataac ttgatatcg 59

<210> 16

<211> 34

<212> PRT

<213> Artificial

<220>

<223> Part of the Vtgss-CAT (Vtgss from Oreochromis aureus - CAT of bacterial origin) fusion in the pBSVtgCAT vector

<400> 16

Met Arg Val Leu Val Leu Ala Leu Ala Val Ala Leu Ala Val Gly Asp  
1 5 10 15

Gln Ser Asn Leu Gly Asp Leu Leu Gln Lys Lys Val Thr Gly Trp Thr  
20 25 30

Thr Val

<210> 17  
<211> 3  
<212> PRT  
<213> Artificial

<220>  
<223> Part of the Vtgss-CAT (Vtgss from Oreochromis aureus - CAT of bacterial origin) fusion in the pBSVtgCAT vector

<400> 17

Gly Gly Ala  
1

<210> 18  
<211> 66  
<212> DNA  
<213> Artificial

<220>  
<223> Part of the nucleotide sequence adjoining Vtgss (derived from Oreochromis aureus) and CAT (derived from bacteria) in the vector psp-VtgCAT

<400> 18  
ggcgggcgct aattttttta aggcacggcc gatgcgacgg tatcgatatt gttacaacac 60  
cccaac 66

<210> 19  
<211> 155  
<212> DNA  
<213> Artificial

<220>  
<223> Nucleotide sequence of the Vtg-EGFP (Vtg derived from Oreochromis aureus - EGFP derived from Aequoria victoria) fusion in the vector pVtgEGFP

<400> 19  
gctagcgcta ccggactcag atcaattcac atccaccagc catgagggtg cttgtactag 60  
ctcttgctgt ggctctcgca gtgggggacc agtccaactt ggggatcca ccggtcgcca 120  
ccatggtgag caagggcgtg gtgcagaact ccggg 155

<210> 20  
<211> 38

<212> PRT  
<213> Artificial

<220>

<223> Amino acid sequence of the Vtg-EGFP (Vtg derived from Oreochromis aureus - EGFP derived from Aequoria victoria) fusion in the vector pVtgEGFP

<400> 20

Met Arg Val Leu Val Leu Ala Leu Ala Val Ala Leu Ala Val Gly Asp  
1 5 10 15

Gln Ser Asn Leu Gly Asp Pro Pro Val Ala Thr Met Val Ser Lys Gly  
20 25 30

Val Val Gln Asn Ser Gly  
35

<210> 21

<211> 204

<212> DNA

<213> Artificial

<220>

<223> Nucleotide sequence at the junction of Vtgss (derived from Oreochromis aureus) and B-lactamase (derived from bacteria) in pBADVtgblactKana

<400> 21

ctctactgtt tctccataacc cgTTTTTTTg ggctaacagg aggaattaac catgagggtg 60

cttgtagtag ctcttgctgt ggctctcgca gtggggggacc agtccaactt gggggatcca 120

gaaacgctgg tgaaagtaaa agatgctgaa gatcagttgg gtgcacgagt gggttacatc 180

gaactggatc tcaacagcgg taag 204

<210> 22

<211> 51

<212> PRT

<213> Artificial

<220>

<223> Amino acid sequence at the junction of Vtgss (derived from Oreochromis aureus) and B-lactamase (derived from bacteria) in pBADVtgblactKana

<400> 22

Met Arg Val Leu Val Leu Ala Leu Ala Val Ala Leu Ala Val Gly Asp  
1 5 10 15

Gln Ser Asn Leu Gly Asp Pro Glu Thr Leu Val Lys Val Lys Asp Ala  
20 25 30

Glu Asp Gln Leu Gly Ala Arg Val Gly Tyr Ile Glu Leu Asp Leu Asn  
35 40 45

Ser Gly Lys  
50